SHUTTLEWAGON
MOBILE RAILCAR MOVERS

COMMANDER NXT631

NXT631
Specifications

Up to
4,130 TON
Pushing/Pulling Capacity
Tractive Effort: 41,300 lbs (183kN)* without weight transfer from railcar.

The **Commander NXT** delivers groundbreaking, patented, ShuttleLaunch technology - a system meticulously engineered to optimize tractive effort, minimize wheel slip, and significantly extend tire life.

Next generation control with its joystick operation system, making the complex task of operating a railcar mover as intuitive as playing a video game. The steer by wire system brings a heightened level of precision and responsiveness to the operator's control.

Using a standard AAR coupler, like a locomotive, the NXT ensures secure and reliable connections between railcars. It's a feature that not only boosts safety but also showcases the NXT's compatibility with a wide range of rail vehicles.

Dual rail wheel design in front and rear of machine, provide high maneuverability and stability through curves, switches, and frogs. Control of guide wheels is from four hydraulic cylinders, controlled from the cab. Rail suspension and vehicle suspension are independent, allowing precise travel through adverse track conditions and providing a smooth, quiet ride.

For Narrow or wide applications: Please consult with factory.
*Note: Tractive Effort measured with ShuttleLaunch engaged. Tractive effort may vary with rail and weather conditions. Dimensions and Weight do not include optional equipment. Specifications are subject to change without notice.
**Subscription required after warranty period.

NXT631 General Specifications

Fuel Capacity	72 gallons
Hydraulic Reservoir Capacity	57 gallons
Air Tank Capacity (Rail Brakes)	30 gallons
Air Tank Capacity (Vehicle Brakes)	10.5 gallons
Air Filter	Dry replacement element
Oil & Fuel Filters	Replacement element
Wheel Base	67.5"
Width	102"
Height	144"
Length	274"
Ground Clearance	14"
Gross Vehicle Weight (GVW)	61,000 lbs
First Gear	0 to 4 mph (Rail and Road)
Second Gear	0 to 8 mph (Rail and Road)
Third Gear	0 to 14 mph (Rail), 0 to 10 mph (Road)

Standard Features

- Joystick Control
- ShuttleLaunch
- Sanders
- Air knife
- Deadman/RSC switch
- ShuttleWatch impact monitoring
- ABS vehicle brakes
- Anti-slip traction control
- CAN-bus electrical system
- Windshield wipers
- Engine diagnostic adapter
- Exterior mounted cameras with dual monitors on operator's armrest
- Speed based rail pressure
- Two 12-volt power receptacles
- Tinted cab glass
- Air ride operator seat
- Fold out jump s eat
- LED work lights
- Cab AC and Heat
- Shuttle Track telematics**

Optional Features

- Sliding Cab
- Orange Seat Belt / Seat Presence Switch
- Single Point Lube System
- Cab Pressurizer
- Turn Signals
- High Output 160 Air Compressor
- Cold Weather Package
- Cattron Remote
- Hetronic Remote
- Remote Groundman E-Stop
- 360 Camera System
- DVR
- Spotlights
- Hydraulic Broom
- Snow Plow
- Corrosion Resistance Package
- Air Bell
- Consult with factory for additional options available

SHUTTLEWAGON
MOBILE RAILCAR MOVERS

COMMANDER NXT631

Engine	Model	Cummins diesel engine model QSB 6.7 L (electronic)
	EPA	Stage 5 single canister aftertreatment
	Horsepower	200 HP @ 2500 RPM
	Max Torque	600 ft-lbs
	Electronic controlled diesel engine	Electronically controlled safety features
	Radiator	Charge air and engine radiator in engine bay. Transmission and oil cooler in hydraulic compartment.
	Exhaust	Vertically mounted away from cab to reduce noise and bent to prevent debris intrusion. Simple single cannister design.
Transmission	Powershift transmission	Four speed forward and reverse both on rail and on road. Remote mounted long drop transmission, with integrated torque converter. Connected to engine via 7C driveshaft. Manual gear selection with shift protection (downshift and forward/reverse). Operator interface shows gear, direction, and transmission diagnostics.
Drive Lines	7C Series	Three heavy duty driveshafts throughout the powertrain.
Axles	Planetary axles	Front: Heavy duty planetary drive steer axles. Rear: Heavy duty planetary non-steer axle. Mechanically locked differentials in both front and rear.
Frame	All welded steel construction	Manufactured compartments on each corner of the frame allows for ergonomic maintenance access. Air, Hydraulic, Electrical, and Fuel compartments are all segregated to their respective components. Stepped frame rails allow easy access to both sides of the engine.
Rail Gear	Rail guidance system consists of (8) 16" (406mm) diameter AAR profile rail guide wheels.	Dual rail wheel design in front and rear of machine, provide high maneuverability and stability through curves, switches, and frogs. Control of guide wheels is from four hydraulic cylinders, controlled from the cab. Rail suspension and vehicle suspension are independent, allowing precise travel through adverse track conditions and providing a smooth quiet ride.
Brakes	Service	Heavy duty air over hydraulic wet disc brakes for longer life and less exposure in harsh environments. Redundant braking system with pneumatic only foot pedal and joystick braking. Vehicle brakes utilize ABS (Antilock Brake System) while on rail.
	Parking	Integrated into rear, rigid axle. Transmission cannot be shifted into forward or reverse with parking brake engaged.
	Rail	80 cfm twin air compressor. AAR glad hand connections located front and rear. Proportionally controlled thumb paddle on the joystick electronically controls brake pipe pressures. Rail brake valve protected with safety filter for harsh environments.
Antilock Brakes (ABS) & Traction Control (ATC)	Electronic controller monitors rail wheels and tires to detect tire slip on the rail.	ABS: The valve controls vehicle brake pressure to minimize lockup by pulsing the air pressure control to the pressure converter. ATC: When wheel slip is detected, throttle input is automatically reduced to the engine rpm that maintains maximum drawbar pull. An indicator will flash to notify the operator of tire slip. ABS and ATC are in rail mode only.
Steering	Steer-by-wire	Electronic over hydraulic control with redundant feedback from multiple steering encoders. Steering position sensors provide operator with precise tire position. Axle integrated steer cylinder and straight ahead switch. Steering is locked out when operating on rail.
Couplers	Front and Rear Couplers	Cast steel full size AAR coupler with automatic latch, cabcontrolled air unlatch. NON-WEIGHT TRANSFER design, wide range AAR sliding couplers with buffer system to reduce shock load to railcar mover during coupling operation. Couplers are hydraulically positioned from side to side with controls located on instrument panel inside cab. Video camera system to view rear coupler from cab.
Hydraulic System	Variable displacement load-sensing pump driven from transmission.	Centrally located main manifold is two-pressure design electric operated and detent maintained (provides the safety of manual valves). All solenoid valves have manual overrides. Rear driver side compartment has filter station for easy, ergonomic access during PM's.
Pneumatic System	80 cfm engine mounted compressor with 30-gallon air tank.	Heated air dryer and desiccant cartridge with single mounting bolt for easy maintenance. All reservoirs equipped with drain valves. Front passenger compartment has 90% of air system components for commonization simplicity.
Sliding Cab (Option)	High visibility, steel cab mounted on rubber isolator bushings at opposite end from engine to reduce noise. Slides 12" outward from machine to allow direct line of sight around rail cars.	Designed for operator comfort and visibility. New operator station is ergonomic and simplistic. Includes multiple displays for machine feedback and operator input. Joystick controls for machine throttle and braking, horn, Deadman's switch, shifting, and train brake control. Control panels have shifting, lights, windshield wipers, cab slide, and E-stop button. All machine controls are at operator's fingertips. 180° rotating air ride seat allows direct line of sight operation while operating in reverse.
Intstrumentation	Dual monitors with color display, push buttons, and warning light.	CAN Bus system allows direct communication with engine and transmission, for display of all operating conditions and alarms. Right-hand operating screen displays critical machine operation (engine RPM, machine speed, etc.). The left-hand operating screen is the operator input for control of the machine (HVAC, low rail pressure, machine modes, etc.) The message window, with light and buzzer, alerts operator of important events and alarms. Digital rail brake reservoir, brake pipe gauge, and system air pressures.
Electrical	12 Volt starting and lighting with 160-ampere alternator.	Two Heavy-duty maintenance-free batteries rated at 950 CCA. Batteries located in self-contained battery box integrated into hood enclosure. Two amber strobe lights, one mounted on each side of cab. LED corner markers. Cab interior dome lights to illuminate instrument panel. Automotive fuses and circuit breakers provide protection for each electrical circuit. Front driver compartment stores electrical controllers and fuses for machine functionality.
Warning Signals	Two dual blast type air horns.	One air horn facing forward and one facing rearward. Back up alarm for road and rail operation.
Tires & Rims	Four 14.00xR24 tubeless mining tires.	Mounted on solid disc three piece construction type rims.
Sanders	Air operated, electrically controlled from cab.	Two sanders two for each drive wheel, in the direction of travel. Two steel sander boxes that hold a total of 250 pounds of sand.
Ladders	One ladder per side, with crossover walkway at front end.	Ladders have inclined steps with breakaway lower step. Lighter weight for operator handling, to access tires.